DRAFT Proposed Environmental Sustainability Baseline Conditions For Aggie Research Campus
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The City of Davis Natural Resources Commission met on April 27, 2020 to discuss the proposed Aggie Research Campus (ARC) Project (Project). At this meeting, the NRC formed a special subcommittee to develop environmental sustainability features for the Project. These environmental sustainability features, outlined below, will be reviewed with the full commission during a special meeting on May 14, 2020. Following this meeting and approval by the Natural Resources Commission, a recommendation will be submitted to the City Council for specific "Baseline Project Features" to be included in project plans submitted for voter approval of the Project pursuant to a Measure R vote.

Proposed Environmental Sustainability "Baseline Project Features"

Measurement and Verification
To ensure accurate tracking and reporting of achievement of sustainability goals in the project, the developer will establish a Master Owners Association for the Project which reports to the City and is responsible for measurement, verification and assuring compliance with Project sustainability obligations and mitigation measures defined in an Approved Mitigation Monitoring Reporting Plan. Annual reports will be prepared by the Master Owners Association and submitted to the City. These Annual Reports shall include progress towards meeting sustainability goals, as outlined in the baseline features and indicate what actions will be taken in the following year to meet phased actions as part of the sustainability obligations and mitigation measures.

Energy Efficiency and Usage
The developer shall commit to maximizing clean energy production onsite and to implementing a program within the Project to ensure that all structures consume 100 percent renewable electricity. In furtherance of this pledge, the Developer shall commit to the following energy efficiency measures:
- Photovoltaics (PV) will be installed on every conducive structure and in parking areas.
- The Project will enter into a purchase and sale agreement for excess power beyond site use with Valley Clean Energy (or another electric utility company) to which it will sell, and through which it will distribute, all electricity generated onsite. This arrangement will ensure that all power generated onsite is used on the project site or locally.
- The Project will be fueled by 100 percent clean energy. All Project structures, residential and commercial, will purchase power from solely renewable sources such as Valley Clean Energy's "UltraGreen" 100 percent renewable and 100 percent carbon-free service (or equivalent) to offset any electric deficit.
- Onsite renewables and storage will support net zero energy outdoor lighting.
- In anticipation of improved solar-connected energy storage, the Project will be designed and pre-wired for future microgrid capacity and energy storage.
- All onsite residential units will be all-electric.
- All onsite commercial buildings will be all-electric. Fossil fuels (e.g., natural gas, propane) will only be allowed for manufacturing processes as specified by a tenant.
- All onsite buildings will achieve zero net carbon for building envelope including heating, ventilation and air conditioning (HVAC), and lighting with onsite renewables and storage.

Transportation Demand Management Plan
The Project shall implement a Transportation Demand Management Plan (TDM plan) with measurable results and goals to quantitatively shift away from single occupancy vehicle (SOV) use and incentivize a mode shift to bicycling, public transit, private transit, or 3+ car pool and to determine which traffic mitigations are needed at each phase of Project development. These actions serve to reduce the Project's vehicle miles traveled (VMT), transportation total carbon footprint, and adverse level of service (LOS) traffic impacts on Mace Boulevard, Covell Boulevard and I-80. Prior to, or concurrent with, adoption of Final Development Agreement, the developer shall finalize a TDM plan acceptable to the City which shall include, in part, the following:
- Prior to the commencement of construction of each phase, a traffic study will be prepared which measures in- and out-flow from the Project and identifies traffic patterns. This analysis will be shared with the City to determine which traffic mitigation measures are necessary over and above

those further specified below to accommodate each phase of development. This analysis will also serve to inform the City on mode share and to trigger the need for increased public transit services.

- The Project will be designed to accommodate private transit, local transit (Unitrans), and regional transit (Yolobus). It will include a centralized transit plaza to serve as the hub for a variety of mode shares.
- The developer will petition Yolobus and Unitrans, both of which have bus service contiguous to the site, to increase the frequency and capacity of bus service as the Project develops. The developer will provide funding, if necessary, to the transit services to implement the change.
- The developer will install traffic counters to measure traffic to and from the Project.
- The developer will only commence phases in the Project build once the following capital improvements and operational improvements in transit and road improvements are completed or financing and regulatory approvals are obtained as specified:
  - o Phase 1 –
    i) Developer will ensure public or private funding and regulatory approvals to study and implement bus rapid (BRT) transit strategies including a bus signal preemption system on Mace Boulevard and Covell Boulevard for freeway access or local traffic bypass.

    ii) Developer will ensure public or private funding and regulatory approvals for a rush-hour bus and high occupancy vehicle (HOV) lane on the frontage road north of I-80 to allow traffic to bypass Mace Blvd east bound on-ramps and west bound off-ramps to I-80.

    iii) Developer will ensure public or private funding and regulatory approvals for implementation of an on-demand electric transit to and from UCD and scheduled electric transit to and from Amtrak/Capital Corridor running weekdays from and including the AM to PM peak commute periods.

    iv) Developer will ensure public or private funding and regulatory approvals for construction of a new grade-separated bicycle and pedestrian crossing of Mace Boulevard located near the Mace Drainage Channel (north of Alhambra Drive).

    v) Developer will ensure public or private funding and regulatory approvals for construction of a new Class I shared-use path on the inside of the Mace Curve between the new grade-separated bicycle and pedestrian crossing and Harper Junior High School.

    vi) Developer will ensure public or private funding and regulatory approvals for construction of a landscaped pedestrian connection between the project site and the existing Mace park-and-ride

    vii) Developer will ensure public or private funding and regulatory approvals for construction of improved pedestrian and bicycle connections for both north-bound and south-bound pedestrian and bicycle traffic on the Mace Blvd-I80 overpass.

    viii) Developer will ensure public or private funding and regulatory approvals for construction or implementation of all other mitigation measures proposed in the Aggie Research Campus Draft Subsequent EIR and Appendix F - Transportation Impact Analysis.

  - o Phase 2 – Developer will ensure public or private funding and regulatory approvals are finalized for the installation of bus/3+ HOV lanes on I-80 east and west of causeway.

  - o Phase 3 –
    i) Developer will ensure public or private funding and regulatory approvals are finalized for Causeway expansion by bus/3+ HOV lane eastbound and westbound.

    ii) Developer will petition to reroute Unitrans and Yolobus service into and through the Project site and provide funding, if necessary, to the transit services to implement the change.

    iii) Developer will ensure public or private funding and regulatory approvals are finalized for the "Potential Operational Enhancements" identified in the Traffic Study in the Draft Subsequent Environmental Impact Report.

- The developer will ensure transit stops are located throughout complex to ease pedestrian access such that no transit stop is further than 400 meters from any onsite location.
- Implement a Transportation Demand Management Plan with measurable results to quantitatively shift away from Single Occupancy Vehicle (SOV) use.

Parking Lots and Internal Streets

The desired outcomes of any design features of the Project's parking lots and internal streets shall be to: encourage a mode shift to bicycling, public transit, private transit, or carpool; encourage electric vehicle use where SOV use is necessary; reduce run-off and heat island effect of parking lots; and to reduce visual, aesthetic, and quality of life impacts of working/living near parking lot. To further these desired outcomes, the developer shall implement the following features in its parking areas and/or along the Project's internal roadway system:

- Low-impact development (LID) features, such as bioswales and permeable pavement, will be implemented in all streets and surface-level parking to capture and filter runoff and maximize groundwater recharge.
- All parking surfaces or street-adjacent sidewalks using tree shading will use structured soil or suspended substrate to allow successful tree root development. Developer will size pavement treatment area to accommodate the tree varietal's intended tree size.
- Landscaping will provide 80 percent shading of pedestrian walkways and off-street Class I bike paths. Fifty (50) percent parking lot shading will be achieved through either shade trees of PV arrays. These requirements will be demonstrated at the time of building permit for PV arrays or will be achieved with in 15 years of planting for areas shaded by trees. Failure to meet shading requirements shall be considered a code violation and subject to penalty until remedied. Progress towards shading requirement will be included in each Annual Report.
- Transit access will be given priority over auto parking through _____.
- Parking preference and priority will be given to high occupancy vehicles (HOV) and electric vehicles (EV). Only HOV and EV parking will be allowed adjacent to buildings, with the exception for handicap parking adjacent to buildings which will not be restricted. All stalls designated for EV will have charging stations pre-installed.
- All commercial and residential parking areas will be prewired and designed with infrastructure to gradually phase-in the installation of EV charging stations as demand grows. The demand for EV charging will be reported in each year's Annual Report.
- All remote residential parking areas will be prewired and designed with infrastructure to gradually phase-in the installation of EV charging stations as demand grows. The demand for EV charging will be reported in each year's Annual Report.
- All housing will include one Level 2 EV charger per unit. Townhomes, if built to accommodate two vehicles, will be prewired to allow for the installation of a second charger.
- All commercial parking for non-electric SOV will be paid parking. To encourage occasional bus use, no discounts for monthly parking versus daily parking will be allowed.
- All streets, parking lots, and bicycle parking areas will use permeable pavement where permissible.

Landscaping and Water Conservation

To reduce Project demand on groundwater and potable water the developer shall commit to the following measures:

- All selected landscaping will be adapted for climate change, drought resistant, pollinator friendly, and maintained organically.
- Native and drought tolerant plants will predominate the plant pallet. A diversity of native habitats will be disbursed and managed throughout the site, primarily within the agricultural buffer and along the channel, including but not limited to riparian and California oak savanna.
- Turf will be strongly discouraged and used only in areas programmed for activities such as "The Oval" or organized sports fields.
- Developer will engage with the Center for Land Based Learning, the UC Davis Arboretum, or other local expert to design and manage its open and landscaped buffer areas. Landscape plans will be subject to City review including review by the Open Space and Habitat Commission and the Tree Commission.

Commented [CAD1]: Full NRC to discuss what is included: public (Yolobus, Unitrans) or only private (electric bus)

Commented [CAD2]: More frequent stops could be proposed. 400m-800m is recommended by the USDOT. https://safety.fhwa.dot.gov/ped_bike/ped_transit/ped_transguide/ch4.cfm

Commented [CAD3]: To discuss with full NRC

Commented [CAD4]: Current proposal by ARC is to install parking at a ratio of 1 stall per unit for both single family townhomes and multi-family apartments.

Commented [5]: Level of minimum parking fees to be assessed to reduce onsite parking to be discussed with full NRC

- Developer will install infrastructure suitable for conveyance of non-potable water for all landscape irrigation demands. Developer will convert this system to reclaimed/greywater water if and when such service is made available.
- All runoff will be captured, conveyed and detained onsite in a series of bioswales intended to filter the run-off and maximize groundwater recharge. All storm water will be retained onsite using swales, ponds, or other appropriate facilities, up to a __-year storm.
- All gray water will reused onsite where practical and permissible. Developer will install infrastructure (2-way valves and piping) to support use of greywater from laundry facilities in all Townhomes. Opportunities for Multi-family housing and commercial use of greywater will be identified by the Developer and appropriate infrastructure installed. The Master Owner's Association shall review uses of greywater to prevent pollution and shall require future installation where appropriate.

> **Commented [CAD6]:** Discuss amount of onsite storage required with full NRC. Proposal from ARC was to use City land (Howitt) for retention basin

Housing
Housing at ARC is included to maximize the environmental benefits of mixed-use development. The inclusion of housing and an overall complementary mix of uses reduces the number and distance of project-related vehicular trips, encourages walking and bicycle trips, reduces air quality impacts and reduces the overall carbon footprint of the project. Functional Goal: a) Provide workforce housing to address increased housing demand due to job creation, and b) Reduce VMT and adverse rush hour LOS traffic impacts. To further increase the sustainability benefits of onsite housing, the Developer commits as follows:

- Housing will be medium- and high-density with a range of 15-50 units per acre. No single-family detached housing will be permitted.
- Housing will be designed to meet the housing needs of the workforce and will not resemble student-oriented housing found elsewhere in the City. No unit will be greater than three bedrooms. Rental apartments will not exceed two bedrooms.
- Housing construction will be directly linked to the development of commercial space at a ratio of no more than one dwelling unit per 3,000 square feet of nonresidential space. This linkage will correlate the availability of housing with the creation of jobs which will maximize ARC employee occupancy of the housing.
- Multifamily rental units will be charged separately for parking so that any resident may have the option of renting car-free housing.
- The developer will require employer master leasing or ownership of housing units and require employment for residency. These requirements will be dependent a minimum firm size of __ employees.

Mitigation Measures
The project shall comply with and ensure public or private funding and completion within a 2 year period for all Mitigation Measures identified in the Approved Mitigation Monitoring Reporting Plan.